

IN THE SPECIFICATION

Please amend the specification as follows:

Please amend the paragraph beginning at page 4, line 28 as follows:

The signal is then split into its quadrature components and demodulated in a single stage using mixers MI 14 and MQ 16, and orthogonal signals generated by local oscillator ~~(LO2) 32~~ (LO) 33 and 90 degree phase shifter 34. ~~LO2 32~~ LO 33 generates a regular, periodic signal which is tuned to the incoming wanted frequency rather than an IF frequency as in the case of the super-heterodyne receiver. The signals coming from the outputs of MI 14 and MQ 16 are now at baseband, that is, the frequency at which they were originally generated. The two signals are next filtered using low pass filters LPFI 36 and LPFQ 38, are amplified by gain-controlled amplifiers AGC1 40 and AGCQ 42, and are digitized via analog to digital converters AD1 44 and ADQ 46.

Please amend the paragraph beginning at page 8, line 24 as follows:

Figure 10 presents a block diagram of a circuit for generating $[[\phi_2]] \phi_1$, in an embodiment of the invention;